

21. (Twice Amended) An electrode produced by the method of Claim 1, wherein:
the electrolyte composition in the coating step is in a sol state,
the electrolyte composition contains an electrolyte salt, a matrix polymer, and a swelling solvent, and
the matrix polymer is further defined as being selected from the group consisting of polyhexafluoropropylene, polypropylene oxide, polyphosphazene, polysiloxane, polyvinyl alcohol, polyacrylic acid, polymethacrylic acid, styrene-butadiene rubber, nitrile-butadiene rubber, and polycarbonate.

REMARKS

Claims 1-11, 14 and 16-24 are pending in the application. Claims 1-10 are allowed. In the Final Office Action of December 17, 2002, the Examiner made the following disposition:

- A.) Rejected claims 11, 14 and 16-22 under 35 U.S.C. §102(b) as anticipated by or, in the alternative, under 35 U.S.C. §103(a) as obvious over *Gies et al.*
- B.) Rejected claims 23 and 24 under 35 U.S.C. §102(b) as anticipated by or, in the alternative, under 35 U.S.C. §103(a) as obvious over *Gies et al.* in view of *Sun*.

Applicants respectfully traverse the rejections and address the Examiner's disposition as follows:

- A.) Rejection of claims 11, 14 and 16-22 under 35 U.S.C. §102(b) as anticipated by or, in the alternative, under 35 U.S.C. §103(a) as obvious over *Gies et al.*:

Applicants respectfully disagree with the rejection.

Applicant's independent claims 11 and 21 have each been amended to limit the members of the claimed matrix polymer Markush group. Attached hereto is a marked-up version of the changes made to the claims by the current amendment. The attached page is captioned "VERSION WITH MARKINGS TO SHOW CHANGES MADE".

Applicants' claims 11 and 21, each as amended, each claim an electrolyte composition containing an electrolyte salt, a matrix polymer, and a swelling solvent. The matrix polymer is further defined as being selected from the group consisting of polyhexafluoropropylene, polypropylene oxide, polyphosphazene, polysiloxane, polyvinyl alcohol, polyacrylic acid, polymethacrylic acid, styrene-butadiene rubber, nitrile-butadiene rubber, and polycarbonate.

This is clearly unlike *Gies et al.*, which fails to disclose or suggest Applicants' claimed matrix polymer. Applicants have carefully read *Gies et al.* and nowhere does *Gies et al.* even teach the materials polyhexafluoropropylene, polypropylene oxide, polyphosphazene,

polysiloxane, polyvinyl alcohol, polyacrylic acid, polymethacrylic acid, styrene-butadiene rubber, nitrile-butadiene rubber, and polycarbonate. Accordingly, *Gies et al.* fails to disclose or even suggest Applicants' claimed matrix polymer.

Therefore, *Gies et al.* fails to disclose or even suggest Applicants' claims 11 and 21.

Claims 14, 16-20 and 22 depend directly or indirectly from claims 11 or 21 and are therefore allowable for at least the same reasons that claims 11 and 21 are allowable.

Applicants respectfully submit the rejection has been overcome and request that it be withdrawn.

B.) Rejection of claims 23 and 24 under 35 U.S.C. §102(b) as anticipated by or, in the alternative, under 35 U.S.C. §103(a) as obvious over *Gies et al.* in view of *Sun*:

Applicants respectfully disagree with the rejection.

Applicants' claim 21 is allowable over *Gies et al.* as described above.

Sun also fails to disclose or suggest Applicants' claim 21, because *Sun* also fails to disclose or suggest Applicants' claims matrix polymer. *Sun* discloses a variety of matrix polymers, however, nowhere does *Sun* disclose or suggest a matrix polymer selected from the group consisting of polyhexafluoropropylene, polypropylene oxide, polyphosphazene, polysiloxane, polyvinyl alcohol, polyacrylic acid, polymethacrylic acid, styrene-butadiene rubber, nitrile-butadiene rubber, and polycarbonate.

Therefore, *Gies et al.* in view of *Sun* still fails to disclose or suggest Applicants' claim 21.

Claims 23 and 24 depend directly or indirectly from claim 21 and are therefore allowable for at least the same reasons that claim 21 is allowable.

Applicants respectfully submit the rejection has been overcome and request that it be withdrawn.

CONCLUSION

In view of the foregoing, it is submitted that claims 1-11, 14, and 16-24 are patentable. It is therefore submitted that the application is in condition for allowance. Notice to that effect is respectfully requested.

Respectfully submitted,

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VERSION WITH MARKINGS TO SHOW CHANGES MADE

In the Claims:

Please amend claims 11 and 21 as follows:

11. (Twice Amended) In the gel electrolyte cell production method using an electrode including a rectangular electrode carrier and a gel electrolyte film formed on the electrode carrier and having a width greater than the electrode carrier, the electrode being produced by:

an overlaying step for overlaying a first carrier having a greater width than the gel electrolyte film, a second carrier having a width approximately identical to that of the gel electrolyte film, and the electrode carrier in this order,

a coating step for applying an electrolyte composition onto the first carrier, the second carrier, and the electrode carrier which have been put upon one another in the overlaying step, in such a manner that the applied electrolyte composition has a width greater than the width of the second carrier and smaller than the width of the first carrier,

a first peel-off step for peeling off from the first carrier the second carrier and the electrode carrier coated with the gel electrolyte composition in the coating step and overlaid on each other,

a gelling step for forming into a gel electrolyte film the electrolyte composition applied onto the second carrier and the electrode carrier which have been peeled off from the first carrier in the first peel-off step, and

a second peel-off step for peeling off from the second carrier the electrode carrier and the gel electrolyte film gelled in the gelling step,

wherein the electrolyte composition in the coating step is in a sol state,

wherein the electrolyte composition contains an electrolyte salt, a matrix polymer, and a swelling solvent, and

wherein the matrix polymer is further defined as being selected from the group consisting of [polyvinylidene fluoride,] polyhexafluoropropylene, [polyethylene oxide,] polypropylene oxide, polyphosphazene, polysiloxane, [polyvinyl acetate,] polyvinyl alcohol, [polymethyl methacrylate,] polyacrylic acid, polymethacrylic acid, styrene-butadiene rubber, nitrile-butadiene rubber, and polycarbonate.

21. (Twice Amended) An electrode produced by the method of Claim 1, wherein:
the electrolyte composition in the coating step is in a sol state,
the electrolyte composition contains an electrolyte salt, a matrix polymer, and a swelling solvent, and

the matrix polymer is further defined as being selected from the group consisting of [polyvinylidene fluoride,] polyhexafluoropropylene, [polyethylene oxide,] polypropylene oxide, polyphosphazene, polysiloxane, [polyvinyl acetate,] polyvinyl alcohol, [polymethyl methacrylate,] polyacrylic acid, polymethacrylic acid, styrene-butadiene rubber, nitrile-butadiene rubber, and polycarbonate.

CERTIFICATE OF MAILING

I hereby certify that this correspondence is being deposited as First Class Mail in an envelope addressed to BOX AF, Asst. Commissioner for Patents, Washington, D.C. 20231 on March 17, 2003.

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